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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,470	10/22/2003	Don Kennard	NOBELB.063DV1	5956

20995 7590 03/20/2009  
KNOBBE MARTENS OLSON & BEAR LLP  
2040 MAIN STREET  
FOURTEENTH FLOOR  
IRVINE, CA 92614

EXAMINER
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SINGH, SUNIL K

ART UNIT	PAPER NUMBER
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3732

NOTIFICATION DATE	DELIVERY MODE
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03/20/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
eOAPilot@kmob.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,470	<b>Applicant(s)</b> KENNARD, DON	
	<b>Examiner</b> Sunil K. Singh	<b>Art Unit</b> 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 39-57 and 62 is/are pending in the application.
- 4a) Of the above claim(s) 63-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-57 and 62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/01/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 39,40,43-46,48,56 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauer (US 5,074,790).

Bauer discloses a dental implant that includes: an abutment (7) capable of being adapted with a dental prosthesis; a flexible neck segment (5) connected to the abutment (Fig. 1); a body segment connected to the flexible neck segment, the body segment having threads extending helically about the implant axis (Fig. 1); the thread diameter tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end; a torque engagement segment (4) positioned below the flexible neck portion (5) and above the body segment (Fig. 1); wherein the torque segment is capable of engaging a torque-imparting tool; wherein the threaded body segment comprises an upper flared section proximal to the neck segment; an intermediate section and a tapered lower section distal from the neck segment; the lower section having a smaller angle of taper as compared to the upper section (Fig. 1); wherein the neck segment is more narrow than both of the upper flared section of the body segment and the abutment (7) (Fig. 1); wherein the thread diameters are constant in the intermediate section; wherein the thread diameter is within the range of about 1-3.5mm (Column 4,

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Line 16); wherein the length of the body segment is approximately equal to the thickness of the cortical layer of the bone in which the implant is to be emplaced; and wherein the implant consists of a titanium alloy material (Column 3, Lines 59-60).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 41,42,47 and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 5,074,790).

Bauer discloses the invention substantially as claimed except for a device that includes: threads of the upper flared section that define a taper angle between about 6 and 14 degrees and between 3 and 7 degrees; wherein the neck segment has a length greater than 5 mm; wherein the body segment is about 12 mm in length; wherein the total length along the implant axis is greater than 20 mm. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bauer to include a flared section with the various claimed ranges of angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233. Furthermore, it would have been obvious to one

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having ordinary skill in the art at the time the invention was made to modify Bauer to include a body/neck segment and a total implant length at the various claimed values; since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. Claims 53-55 rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 5,074,790) in view of Christensen (US 3,466,748).

Bauer disclose a dental implant that shows the limitations as described above; however, they do not show the thread depth tapering. Christensen shows a dental implant having a thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the thread depth of Christensen in order to increase stability and decrease patient trauma in view of Christensen. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific depth and pitch of the body segment.

6. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (US 5,074,790) in view of Nardi et al. (US 5,520,540).

Bauer discloses the invention substantially as claimed except for device where the torque engagement surface comprises a plurality of facets. Nardi teaches a torque engagement device (9) located below the neck segment having a plurality of flat

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surfaces and is capable of engaging a wrench (Fig. 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bauer to include a torque engagement portion having flat sides, as taught by Nardi, in order to provide a device that can be more easily gripped by a tool such as a wrench.

### ***Response to Arguments***

7. Applicant's arguments filed 12/01/2008 have been fully considered but they are not persuasive. Applicant argues that the Bauer does not disclose a torque engagement segment positioned below the neck portion. However, the examiner disagrees. The applicant has failed to provide any structural limitation to the torque engagement element but rather defines the placement of such an element on the implant. Given the broadest reasonable interpretation, the examiner is of the position that element (4) is capable of being engaged with a wrench and thus meets the broadly claimed element. Applicant needs to more structurally define the torque engagement segment in order to overcome the prior art of rejection.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil K. Singh whose telephone number is (571) 272-3460. The examiner can normally be reached on Monday-Friday (Increased Flex Schedule).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris L. Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

03/12/2009

/Sunil K Singh/  
Examiner, Art Unit 3732

/Ralph A. Lewis/  
Primary Examiner, Art Unit 3732